Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for a link layer protocol comprising:

reserving a single buffer of a plurality of buffers ~~link unit or a packet~~ for each of a plurality of virtual channels (VCs);

storing a plurality of buffer indexes corresponding to a [[of a]] plurality of ~~link units~~ buffers not reserved for each VC; and

sharing the ~~remaining link~~ buffers not reserved for each VC among a plurality of VCs.

2. (Currently Amended) The method of claim 1 wherein storing the plurality of buffer indexes comprises storing the plurality of buffer indexes in ~~a link buffer or~~ a first in first out memory(FIFO).

3. (Currently Amended) The method of claim 2 wherein the sharing the remaining ~~link~~ buffers is based at least in part on whether the buffer is used for receiving or transmitting data.

4. (Original) The method of claim 1 wherein sharing the remaining link

buffers allows for switching from one list of link units for a first VC is blocked, the link layer by switching from the first VC's link buffer to the second VC's link buffer.

5. (Currently Amended) An apparatus comprising:

a main transmit buffer and a main receiver buffer for each virtual channel (VC) for a link layer protocol of the point to point network;

a plurality of link buffers to be shared based at least in part on a link buffer list ~~or FIFO~~ for each virtual channel; and

the main receiver and transmit buffers to be sized based at least in part on a round trip delay time.

6. (Original) The apparatus of claim 5 wherein the apparatus is a link layer.

7. (Original) The apparatus of claim 5 wherein the apparatus facilitates the switch from a first VC's link buffer or FIFO to a second VC's link buffer or FIFO if the first VC's link buffer or FIFO is blocked.

8. (Currently Amended) A link layer apparatus ~~protocol~~ comprising:

a main transmit buffer and a main receiver buffer for each virtual channel (VC);

a main transmit buffer and a main receiver buffer for each virtual channel (VC) ~~for a link layer protocol~~ of the point to point network;

a sender component of a link unit coupled to send packets corresponding to

[[for]] a VC to indicate whether the link unit utilized a reserved credit or a shared VC buffer, [[;]] the reserved credit be utilized for a predetermined function if the shared VC buffer is used instead of the reserved credit.

9. (Canceled)

10. (Currently Amended) The link layer apparatus ~~protocol~~ of claim 8 wherein the sender component ~~link layer protocol~~ facilitates [[the]] a switch from a first VC's link buffer or FIFO to a second VC's link buffer or FIFO if the first VC's link buffer or FIFO is blocked.

11. (Currently Amended) The link layer apparatus ~~protocol~~ of claim 8 wherein the predetermined function is for a performance critical use.

12. (Currently Amended) A system comprising:

at least two processors ~~that are~~ coupled into a point to point network;

a main transmit buffer and a main receiver buffer for each virtual channel (VC) ~~for a link layer protocol~~ of the point to point network;

a plurality of link buffers to be shared between the main transmit buffer and the main receiver buffer based at least in part on a link buffer ~~or FIFO~~ for each virtual channel; and

a sender component of a link unit coupled to send packets corresponding to [[for]] a VC to indicate whether the link unit utilized a reserved credit or a shared VC buffer, [[;]] the reserved credit be utilized for a predetermined function if the shared VC buffer is used instead of the reserved credit.

13. (Canceled)

14. (Currently Amended) The system of claim 12 wherein the sender component ~~link layer protocol~~ facilitates [[the]] a switch from a first VC's link buffer or FIFO to a second VC's link buffer or FIFO if the first VC's link buffer or FIFO is blocked.

15. (Original) The system of claim 12 wherein the predetermined function is for a performance critical use.

16. (Currently Amended) A system comprising:

at least two processors ~~that are~~ coupled into a point to point network;

a main transmit buffer and a main receiver buffer for each virtual channel (VC) for a link layer protocol of the point to point network;

a plurality of link buffers to be shared based at least in part on a link buffer list ~~or FIFO~~ for each virtual channel; and

the main receiver and transmit buffers to be sized based at least in part on a round trip delay time.

17. (Original) The system of claim 16 wherein the link layer protocol facilitates the switch from a first VC's link buffer or FIFO to a second VC's link buffer or FIFO if the first VC's link buffer or FIFO is blocked.